



12.PAU.28

PATENT APPLICATION

**UNITED STATES DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
PATENT EXAMINATION BRANCH**

In re application of:

Xianglin Wang

For: Method And Apparatus For

Detecting And Processing Noisy

Edges In Image Detail Enhancement

Application No.: 10/660,329

Filed: September 11, 2003

Group Art Unit: 2621

Amendment

Mail Stop Missing Parts
Commissioner of Patents
PO BOX 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

In response to the Notice to File Corrected Application Papers, dated December 5, 2003,
please amend the Abstract section of the above-referenced patent application as follows.

Examination and allowance of all claims is respectfully requested.

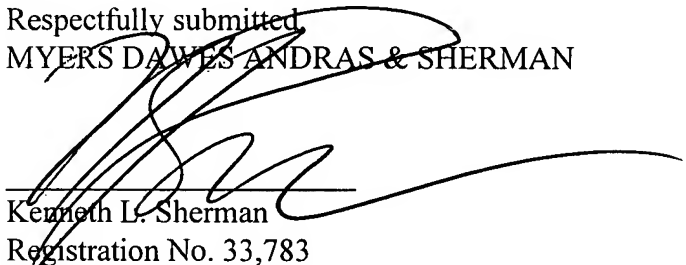
Replacement abstract begins on page 2 of this paper.

A clean copy is provided on Page 3 of this paper for the convenience of the United States
Patent and Trademark Office.

Please replace the Abstract of the application with the following Replacement paragraph:

A method and system that detect image pixels of noisy and sharp image edges, and enhance such pixels differently than other pixels, so that noise around the detected pixels is essentially not boosted. A detection process is conducted on a pixel basis, wherein each pixel is checked together with its neighboring pixels inside a rectangular window centered around a selected/current pixel ~~[[. To]]~~ to determine whether the current pixel belongs to a noisy and sharp vertical image edge or, ~~three columns of pixels centered with the current pixel are used. The mean value and variance value of the pixels in each column are calculated. Based on the three mean values and the three variance values, it can be determined if the current pixel is a pixel in a noisy and sharp vertical edge. Similarly, the current pixel can be checked to determine if it is a pixel in a noisy and sharp horizontal image edge. As such, the current pixel can be classified as either a regular pixel, a pixel in a noisy and sharp vertical image edge, or a pixel in a noisy and sharp horizontal image edge.~~ If the current pixel is classified as a regular pixel, image detail enhancement is performed normally at the current pixel location. Otherwise, mean values of pixels in a rectangular window centered with the current pixel are used to calculate the unsharp signal. The unsharp signal is then processed as in the case of the regular pixels to obtain a detail enhanced image.

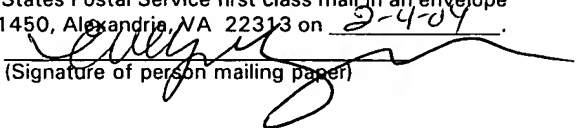
Respectfully submitted
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service first class mail in an envelope addressed to: Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on 2-4-04.

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